ABSTRACT

EVALUATION THE ACTIVITY INHIBITION OF TYROSINASE OF TOMATO EXTRACT IN NANOSTRUCTURED LIPID CARRIER AND SOLID LIPID NANOPARTICLE DELIVERY SYSTEM

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The present research tested effects of drug delivery system on the activity inhibition of tyrosinase of tomato extract. The use of Nanostructured Lipid Carrier (NLC) was expected to make the preparation more effective. Effectiveness determination of various drug delivery systems was conducted by testing activity inhibition of tyrosinase that was expressed as percentage inhibition. Tyrosinase was an enzyme that played an important role in the process of melanin formation of human skin. Activity inhibition og tyrosinase by tomato extract was determined in vitro by observing absorpstion value of dopachrome (an intermediate product of melanin formation) using spectrophotometer.

The purpose of this study is to compare the effectivity of tomato extract in NLC and Solid Lipid Nanoparticle (SLN) on the activity inhibition of tyrosinase. Based on the result, it was found that NLC increase the effectivity of tomato extract on the activity inhibition of tyrosinase than SLN and Simple Cream (SC).

Keyword : tomato extract, nanostructured lipid carrier, solid lipid nanoparticle, tyrosinase, enzyme, inhibition.